ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Medical Monitoring

Description

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended [42 U.S.C. 9604; 104(i)(9)], provides for the Administrator of ATSDR to initiate a health surveillance program for populations at significant increased risk of adverse health effects as a result of exposure to hazardous substances released from a facility. This special program is called medical monitoring.

Background Statistics

- ATSDR's public health assessments and advisories released in the past 4 years indicate that more than 3 million people were exposed or potentially exposed to contaminants at Superfund sites investigated by the agency.
- During the same period, about 4% of the sites were categorized as urgent public (human) health hazards and 49% of the sites as public (human) health hazards.
- From agency experience to date, ATSDR anticipates that between 2% and 4% of all NPL sites may be considered for medical monitoring because documented exposure to substances indicates a specific adverse health effect in a significant percentage of the exposed population.

Site Examples

- Hanford, Washington—From 1944 through 1972, the U.S. Department of Energy's Hanford nuclear facility released radioactive materials into the atmosphere—primarily iodine-131—and into the Columbia River. ATSDR has determined that about 14,000 children who lived in areas downwind of Hanford from 1945 to 1951 received high exposure to iodine-131 through drinking contaminated milk, and are at risk of having thyroid abnormalities, including thyroid cancer and hypothyroidism, as a result. ATSDR has announced its intention to initiate a medical monitoring program to screen these people for thyroid disease and to refer them to appropriate health care providers for any needed treatment.
- Bunker Hill, Idaho—The Bunker Hill site, one of the largest Superfund sites, is the legacy of more than 100 years of mining operations that resulted in extensive lead contamination in the Silver Valley. Because of a faulty baghouse, stack emissions during 1974 and 1975 averaged 35.3 tons of lead per month. This resulted in widespread contamination of the surrounding areas. Approximately 3,000 people have had documented exposure to lead; investigators have identified blood lead levels as high as 164 micrograms lead per deciliter blood (µ/dL). (The Centers for Disease Control and Prevention have established an acceptable blood lead level of 10 µg/dL.) ATSDR is planning the establishment of a medical monitoring program at this site to screen exposed persons, including the most vulnerable segment of the population—children—for neurologic disorders, kidney disease, hypertension, and bone disease.

Additional Information

- ATSDR is mandated under CERCLA 104(i)9 to establish medical monitoring programs for people who have been exposed to hazardous substances at sites where the agency has determined that there is a significantly increased risk of identified disease.
- ATSDR has established seven criteria for determining the appropriateness of medical monitoring programs under this mandate. These criteria will be applied at candidate sites to ensure maximum efficiency in use of the agency's resources to protect the communities at highest risk.
- Remediation of such sites is not always sufficient to deal with public health issues. Past exposure to hazardous substances can result in future disease. In such cases, establishing a medical monitoring program is necessary to permit early detection of disease and medical intervention, as appropriate. This approach is cost effective and in accordance with current public health practice.

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